

HP Network Virtualization



Virtualize real-world network conditions in your software testing environment



Testing isn't an option. It's a requirement.

Demand for anywhere, anytime access to information has given rise to mobile, cloud, and highly distributed application infrastructure. As composite applications continue to evolve into significant competitive differentiators and create new communications channels, your business must continually evolve and deploy applications that meet, or exceed, end-user expectations.

This can be a tough proposition, given the increasingly distributed nature of today's applications and their users. As application environments become more complex, there are many new points for performance bottlenecks. In this new era for IT, deploying applications without testing against network variables cannot be an option.

Before your application goes live, you now need to test for and optimize the end-user experience under realistic network conditions in your pre-deployment lab. That's the idea behind HP Network Virtualization.

Accelerate and optimize application performance testing

HP Network Virtualization integrates seamlessly into [HP LoadRunner](#) and [HP Performance Center](#) software to improve the accuracy of software testing by incorporating real-world network conditions into your load and performance testing processes. HP Network Virtualization, based on virtualization technology acquired from Shunra, gives you the ability to virtualize real-world network conditions, analyze test results to isolate potential bottlenecks, and gain custom performance optimization recommendations.

HP Network Virtualization is the only HP-certified solution specifically designed to accelerate and optimize application performance testing across WAN, web, mobile, and cloud networks. The software improves your organization's ability to detect and remediate performance bottlenecks prior to deployment and accurately predict application behavior under real-world virtualized network conditions.

Easy to configure and use, HP Network Virtualization requires no script editing and places no limits on test scheduling. In addition, test results and data are automatically stored within HP results files and segregated by emulated location for precise and actionable analysis.

Key capabilities

From within the familiar HP Software interface, organizations worldwide leverage HP Network Virtualization to:

- Enable each load generator to emulate a different network location's transaction response time, and reduce or eliminate reliance on remote load generators
- Aggregate test results into a single database for ease and completeness of analysis
- Extend testing scripts with a single click
- Automate reporting and analysis for performance engineers, line of business owners, and other business constituents

Leverage an integrated approach

The HP Network Virtualization suite of solutions provides an integrated approach that incorporates multiple best practices for ensuring accurate and reliable virtualized software testing. These include:

Discovery

- Identify and record actual application infrastructure and production network conditions, business processes, application topology, and deployment scenarios.

Network virtualization and testing

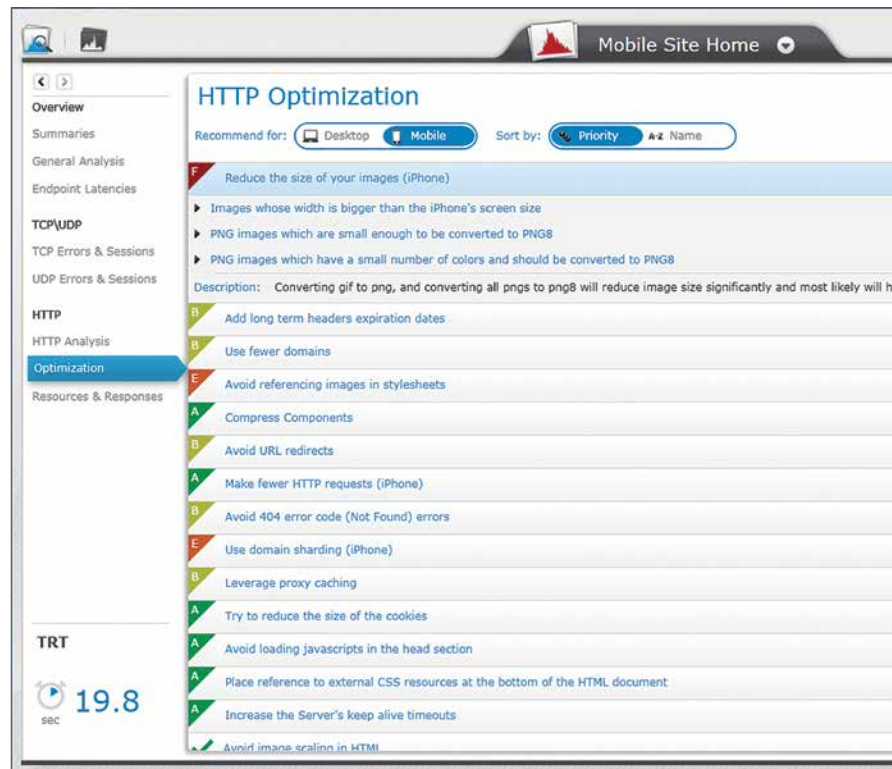
- Virtualize production environment conditions, including users, services, and network conditions in order to accurately emulate user experience.
- Leverage integration with automation, load, and functional testing tools to enable reliable single-user and multi-site/multi-user testing.

Analysis and network optimization

- Thoroughly analyze test results to identify potential performance bottlenecks, validate performance, and enable SLO compliance before application deployment.
- Implement recommended optimization strategies to improve performance and help ensure a positive end-user experience.

Automatic optimization recommendations

HP Network Virtualization offers a performance scorecard that automatically grades application performance and offers suggestions for optimization.



Powerful features for performance testing

HP Network Virtualization supports:

- Windows® 7/2008 operating systems and 64-bit for all platforms
- Bandwidth emulation up to 100 Mbps or unlimited
- Granular IP filtering (by protocol, port)
- Expanded packet capture (up to 1 GB)
- HP Network Virtualization Library
- HP Network Capture

Native integration with HP LoadRunner and HP Performance Center

HP Network Virtualization is available in two editions: HP Network Virtualization for LoadRunner and HP Network Virtualization for Performance Center. The solution's unique interface, integrated within the familiar HP LoadRunner and Performance Center GUI, means no additional scripting requirements are needed to enable performance testing, saving development costs and time while also reducing support requirements.

Robust network virtualization

Because web, mobile, and cloud network conditions are dynamic and vary by provider, location, and time of day, it is essential for testing environments to accurately recreate multiple network scenarios in order to analyze application performance and the effect of network conditions on different user populations. HP Network Virtualization is uniquely capable of virtualizing real-world network conditions, including bandwidth, latency, jitter, and packet loss.

With HP Network Virtualization, each load generator can emulate a different location with a unique set of network conditions, allowing your team to simultaneously emulate multiple user populations and more accurately recreate the real-world conditions affecting the end-user experience.

Location-aware analytics

HP Network Virtualization integrates with HP load-test results, providing deep-dive analytic capabilities and location-specific performance information, including identification of poorly performing business transactions and the root cause of performance issues, along with service level and performance compliance reporting.

Automatic optimization recommendations

HP Network Virtualization features a proprietary performance scorecard that automatically grades application performance and offers custom performance suggestions for web-based, mobile web-based, or native mobile applications. These recommendations have been shown to improve application performance by more than 40%.

HP Network Virtualization Library

Understanding and virtualizing network conditions in a pre-production test environment is a complex challenge due to the constantly changing nature of a production network. The first step in network virtualization for software testing is discovery of the network constraints affecting communication between end users, the application, and its dependencies.

The Network Virtualization Library simplifies this discovery process by providing a searchable library of ready-to-use mobile and broadband network conditions. The library of real-world Internet and last-mile conditions allows you to search millions of data points from thousands of cities worldwide.

In addition, HP also offers HP Network Capture, a highly flexible and powerful network monitor that enables your organization to easily and accurately record, import, and replay real-world network behavior, including conditions such as latency, packet loss, and available bandwidth.

HP Network Virtualization Library

The pre-recorded library of global mobile and broadband network profiles enables rapid testing of mobile applications.



HP Network Virtualization Desktop

HP Network Virtualization Desktop is a Windows-based network emulation software solution that enables your organization to test application performance under a variety of current and potential network conditions, directly from a desktop.

HP Network Virtualization Desktop transforms your traditional LAN-based testing environments, enabling your team to emulate production network constraints within the testing environment in order to generate performance test results that are reliably predictive of real-world application behavior.

This is an ideal solution for your development, testing, and networking teams, as well as any users who need to quickly and accurately understand whether their code or application is ready for the network and remote end users.

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